

202

Pyramids/Cones

p663 7, 14, 21-23

p668 11, 19

p699 11, 12, 15

p663

7. $p = 7 \cdot 4 = 28 \text{ cm}$

$B = 49 \text{ cm}^2$

$LA = \frac{1}{2} 28 \cdot 5 = 70 \text{ cm}^2$

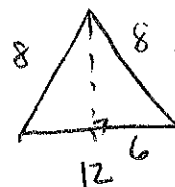
$TA = 70 + 49 = 119 \text{ cm}^2$

14. $p = 12 \times 3 = 36 \text{ cm}$

$B = \frac{12^2 \sqrt{3}}{4} = 36\sqrt{3} \text{ cm}^2$

$LA = \frac{1}{2} 36 \cdot 5.3$
 $= 95.2 \text{ cm}^2$

$TA = 81 + 52.6 = 133.6 \text{ in}^2$



$64 = 1^2 + 3^2$

$28 = l^2$

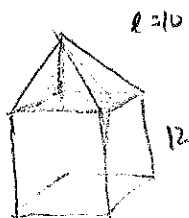
$5.3 = l$

21. Cube & Sq Pyr.

$10^2 = h^2 + 6^2$

$8 = h$

$12 + 8 = 20 \text{ ft}$

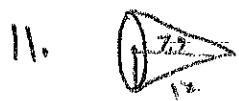


22. $LA_{\text{prism}} = 12 \cdot 4 \cdot 12 = 576$

$LA_{\text{pyramid}} = \frac{1}{2} 48 \cdot 10 = 240$

$576 + 240 = 816 \text{ ft}^2$

p668 11, 19



$12^2 = 7.2^2 + l^2$

$87.75 = l^2$

$9.4 = l$

$p = 18.8\pi$

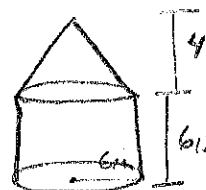
$B = 88.36\pi$

$LA = \frac{1}{2} 18.8\pi \cdot 12 = 112.8\pi$

$TA = 112.8\pi + 88.36\pi$

$201.16\pi \approx 632.0 \text{ ft}^2$

19.



$4^2 + 6^2 = l^2$

$LA_{\text{cone}} = \frac{1}{2} 12\pi \cdot 7.2 = 43.3\pi$

$LA_{\text{cylinder}} = 12\pi \cdot 6 = 72\pi$

$B = 36\pi$

$TA = 151.3\pi$

475.3 in^2

p699 11, 12, 15

11. $30^2 = 18^2 + h^2$
 $24 = h$

$$V = \frac{1}{3} 18^2 \pi \cdot 24$$

$$2592\pi \approx 8143.0 \text{ mm}^3$$

15. $13^2 = 5^2 + d^2$
 $12 = d$

$$V = \frac{1}{3} 36\pi \cdot 5$$

$$60\pi \approx 188.5 \text{ cm}^3$$

12.

45	45	90
$5\sqrt{2}$	$5\sqrt{2}$	10

$$V = \frac{1}{3} (5\sqrt{2})^2 \pi \cdot 5\sqrt{2}$$

$$83\frac{1}{3} \sqrt{2} \pi$$

$$\approx 370.2 \text{ in}^3$$